

Application No. 09/629,746

AMENDMENTS TO THE CLAIMS

Please amend Claims 3-5, 8-9, 11, 22-25, 28, 57-58, 66-69 as follows:

1. (Previously Presented) A method of decorating a molded article comprising:
providing a transfer having a flocking layer, a release sheet on one side of the flocking and a layer of a permanent adhesive on an opposite side of the flocking to adhere the transfer to the molded article;
5 securing the release sheet to an interior wall of a mold in which the article is made;
and
 molding the part such that the resin contacts the layer of permanent adhesive, wherein the temperature of the resin in the mold is less than a melting point of the permanent adhesive;
10 cooling the mold;
 ejecting the part; and
 removing the release sheet from the transfer.
2. (Original) The method of claim 1 wherein the release sheet is affixed to the mold base with an adhesive.
3. (Currently Amended) The method of claim 1 wherein the release sheet is affixed to the mold by vacuum permanent adhesive is a thermosetting polyester.
4. (Currently Amended) The method of claim 1 including a step of preventing the resin from entering interstitial spaces between the flocking wherein the permanent adhesive cross links with the resin in the molding step.

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5. (Currently Amended) The method of claim 4 including a step of preventing the resin from entering interstitial spaces between the flocking and wherein the preventing step includes forming a dam around the perimeter of the transfer.

6. (Withdrawn) The method of claim 5 wherein the dam is formed by placing a barrier in the mold, the transfer being positioned within the barrier.

7. (Original) The method of claim 4 wherein the dam is part of the transfer, the dam comprising a built up section of a binder adhesive around the periphery of the transfer.

8. (Currently Amended) A method of decorating a molded article comprising:
coating a release sheet with a release adhesive;
flocking flock into said release adhesive by embedding a first end of said flock into the release adhesive to result in at least one pattern of flock arranged to form a predetermined design adhered to said release sheet;

applying a permanent adhesive to an opposite side of the flocking;
affixing said release sheet to the interior surface of a mold; and
molding an article over said permanent adhesive introducing a molten resin in said mold to form a molded article; said permanent adhesive permanently bonding said flock to said article, wherein, under the thermal conditions experienced by the permanent adhesive during the molding step, the permanent adhesive does not liquefy and ooze out around the flock and wherein the permanent adhesive is positioned between the flock and the resin and cross-linked with a polymeric material in a portion of the molded article.

9. (Currently Amended) The method of claim 8 wherein ~~further comprising applying a binder adhesive to said flock, said binder adhesive being built up around the periphery of said flock~~ the permanent adhesive is cross linked with the resin.

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10. (Withdrawn) The method of claim 8 wherein said step of forming said barrier comprises providing a dam on the surface of the mold, the transfer being applied to the mold within the dam.

11. (Currently Amended) The method of claim 8 wherein the step of molding the article comprises injecting molten resin into the mold and wherein the permanent adhesive is free of a hot melt adhesive.

12. (Original) The method of claim 11 wherein the resin is initially injected at a first pressure, the first pressure being sufficiently low to prevent dislodgment of the transfer from the mold wall; and then providing a second injection of the resin at a second higher pressure.

13. (Original) The method of claim 11 wherein the injected resin has a lower melting point than the release adhesive.

14. (Previously Presented) The method of claim 8 wherein said step of molding said article over said permanent adhesive comprises molding a surface of said article over said permanent adhesive; said surface being a contoured surface.

15. (Withdrawn) The method of claim 8 wherein said step of molding said article over said permanent adhesive comprising molding a surface of said article over said permanent adhesive; said surface being a generally flat surface.

16. (Previously Presented) The method of claim 1 wherein the permanent adhesive is a layer of binder adhesive.

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17. (Previously Presented) The method of claim 1 wherein the permanent adhesive is a tie coat material.

18. (Previously Presented) The method of claim 11 wherein the permanent adhesive is a thermosetting polymer.

19. (Previously Presented) The method of claim 8 wherein the permanent adhesive is a binder adhesive which adhesively holds said transfer to said article.

20. (Previously Presented) The method of claim 8 wherein said permanent adhesive is a thermosetting adhesive; said thermosetting adhesive cross-linking with the molded article to hold said transfer to said article.

21. (Previously Presented) The method of claim 8 wherein said permanent adhesive is a tie coat material.

22. (Currently Amended) A method for producing a molded article, comprising:
providing a flocked structure, the flocked structure comprising a plurality of flock
fibers adhered to a permanent adhesive;

positioning the flocked structure in a part of a mold;

5 introducing a molten resin into the mold after closure of the mold while the flocked
structure is positioned in the closed mold; and

after solidification of the resin, removing from the mold a molded article comprising
the flocked structure ~~and the solidified resin from the mold~~, wherein a melting temperature
of the permanent adhesive is greater than the maximum temperature experienced by the
10 permanent adhesive during the introducing step, wherein the molded article comprises the
flock fibers and permanent adhesive and a molded part, wherein the permanent adhesive is

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positioned between the flock fibers and the molded part, and wherein the permanent adhesive is cross-linked with a polymeric material in a portion of the molded part.

23. (Currently Amended) The method of claim 22, wherein the permanent adhesive is free of a hot melt adhesive and wherein the introducing step comprises the substep of:

cooling the mold to cause solidification of the resin.

24. (Currently Amended) The method of claim 22, wherein the flocked structure comprises multiple colors of flock defining a decorative design and wherein the permanent adhesive crosslinks with the molten resin.

25. (Currently Amended) The method of claim 22, wherein the flock is resilient and wherein there is no hot melt adhesive layer between the flock and polymeric material.

26. (Previously Presented) The method of claim 22, wherein the flock is at least one of rayon, nylon, and polyester.

27. (Previously Presented) The method of claim 22, further comprising:
electrostatically depositing the flock onto an adhesive-coated substrate to form the flocked structure.

28. (Currently Amended) The method of claim 22, wherein the permanent adhesive is a thermosetting polyester coating coats lower ends of the flock.

29. (Previously Presented) The method of claim 22, further comprising:
maintaining the flocked structure stationary in the closed mold during the introducing step.

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30. (Previously Presented) The method of claim 29, wherein the maintaining step is performed using a vacuum.

31. (Previously Presented) The method of claim 22, wherein the flocked structure comprises:

a dimensionally stable sheet;

the plurality of flock fibers;

5 the first release adhesive attaching the plurality of flock fibers to the dimensionally stable sheet; and

the permanent adhesive coating lower ends of the plurality of flock fibers.

32. (Previously Presented) The method of claim 31, wherein the dimensionally stable sheet is in contact with a surface of the closed mold and the permanent adhesive is a binder adhesive.

33. (Previously Presented) The method of claim 32, wherein a second release adhesive is positioned on an opposite side of the dimensionally stable sheet from the first release adhesive to locate the flocked surface in position inside the mold.

34. (Withdrawn) The method of claim 22, wherein the mold comprises a depression sized to receive the flocked surface.

35. (Previously Presented) The method of claim 31, wherein a melting point of the first release adhesive is higher than a melting point of the resin.

36. (Previously Presented) The method of claim 22, wherein the introducing step is performed by an injection molding technique.

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37. (Previously Presented) The method of claim 22, wherein the introducing step is performed by one of the following techniques: reaction injection molding, blow molding, rotational molding, and transfer molding.

38. (Previously Presented) The method of claim 22, wherein the introducing step comprises:

first introducing a first resin into the closed mold at a first pressure; and

second introducing a second resin into the closed mold at a second pressure, wherein
5 the first pressure is less than the second pressure.

39. (Previously Presented) The method of claim 31, further comprising after the removing step:

removing the dimensionally stable sheet from the molded article.

40. (Previously Presented) The method of claim 31, wherein the permanent adhesive is at least one of a thermosetting adhesive and a water based latex.

41. (Withdrawn) The method of claim 22, wherein the closed mold comprises a raised surface surrounding at least a portion of the flocked surface to prevent the resin from contacting the flock fibers.

42-53. (Canceled)

54. (Previously Presented) The method of claim 1 wherein the permanent adhesive is free of a hot melt adhesive.

55. (Previously Presented) The method of claim 8 wherein the permanent adhesive is free of a hot melt adhesive.

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56. (Previously Presented) The method of claim 22 wherein the permanent adhesive is free of a hot melt adhesive.

57. (Currently Amended) A method for producing a molded article, comprising: providing a flocked structure, the flocked structure comprising a plurality of flock fibers and a permanent adhesive;

positioning the flocked structure in a part of the mold;

5 introducing a molten resin into the mold ~~after closure of the mold~~ while the flocked structure is positioned in the mold to form the molded article, the molded article comprising a molded part, the flock fibers, and permanent adhesive, wherein the molded part comprises the resin, wherein the permanent adhesive is positioned between the flock fibers and the molded part, wherein there is no hot melt adhesive layer located between the permanent
10 adhesive and molded part, and wherein, at the maximum temperature experienced by the permanent adhesive in the mold, the permanent adhesive does not ooze out around the flock fibers.

58. (Currently Amended) The method of claim 57 wherein the permanent adhesive is one of a tie coat material, a binder adhesive, and a thermosetting polyester and wherein a melting temperature of the permanent adhesive is greater than temperatures experienced by the permanent adhesive in the mold and wherein the permanent adhesive cross links with the resin, wherein the permanent adhesive is bonded to the molded part, and wherein there is no hot melt layer between the flock fibers and molded part.

59. (Previously Presented) The method of claim 57 wherein the permanent adhesive is free of a hot melt adhesive.

60. (Previously Presented) The method of claim 57 wherein the permanent adhesive is a thermosetting polyester.

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5 61. (Previously Presented) The method of claim 57 wherein the flocked structure is a transfer and comprises a release sheet and a release adhesive positioned on a first surface defined by ends of the plurality of flock fibers, wherein the permanent adhesive is located on a second surface defined by ends of the plurality of flock fibers, and wherein the first and second surfaces are opposed to one another.

62. (Previously Presented) The method of claim 61 wherein the release sheet contacts an interior wall of the mold cavity.

63. (Previously Presented) The method of claim 62 wherein the release sheet is affixed to the interior wall with a second release adhesive.

64. (Previously Presented) The method of claim 57 wherein the permanent adhesive is a tie coat material.

65. (Previously Presented) The method of claim 57 wherein the permanent adhesive is a binder adhesive.

66. (Currently Amended) The method of claim 1 further comprising before the molding step:

forming the transfer into a nonplanar, three-dimensional shape, wherein there is no hot melt adhesive layer located between the permanent adhesive and resin.

67. (Currently Amended) The method of claim 8 further comprising before the molding step:

forming the design into a nonplanar, three-dimensional shape and wherein there is no hot melt adhesive layer located between the permanent adhesive and resin.

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68. (Currently Amended) The method of claim 22 further comprising before the introducing step:

forming the flocked structure into a nonplanar, three-dimensional shape and wherein there is no hot melt adhesive layer located between the permanent adhesive and molded part.

69. (Currently Amended) The method of claim 57 further comprising before the introducing step:

forming the flocked structure into a nonplanar, three-dimensional shape, wherein there is no hot melt layer between the permanent adhesive and molded part.